

IN THE SPECIFICATION

Please replace page 3, line 27 of the Specification with the following:

-- to an isolation output transformer 212, which forms a lamp current path [[214]]
222 to operate lamp --

Please replace beginning on page 7 line 20 to page 8, line 11 of the Specification with the following:

-- As mentioned above, alternative techniques may be used to monitor the lamp current path in accordance with this invention. Figures 4-7 illustrate some of these alternative techniques. In Figure 4, a transformer 405 is still used as a sensing element, but this change in frequency changes the frequency of a phased-lock loop 410. A Royer-type oscillator is still used, but because the output is a series inductor circuit determinative of frequency, if there was a change in load condition such as arcing, this changes the frequency which can be detected by a phase-lock loop, with a Schmitt trigger 415 preferably being used once again to activate the shut down circuit.

In Figure 5, a transformer 505 is once again used, but a highpass filter (HPF) 510 is used in conjunction with an inverter which is less sensitive than the circuit of Figure 4. In general, the circuit of Figure 5 generates higher DC voltage to the Schmitt trigger 515 to bring about shut down.

The circuit of Figure 6 uses a separate isolation transformer 603 that detects a higher change in current with respect to time in conjunction with a differentiator circuit 610, the output of which is indicative of arcing. Broadly, the circuit is response to a noise component above a certain level of threshold such that if such noise is detected, it is concluded to be arcing. The circuit of Figure 7 represents yet a further alternative embodiment utilizing an optical isolator 708a - 708b to detect and increase in voltage. Under normal operating conditions, the lamp 720 would otherwise clamp the lamp voltage, but if there is an arcing condition, this will allow the voltage to rise much higher. A Zener diode 705 is used, the breakdown voltage of which causes the optoisolator to activate, which, in turn, generates the shut-off signal. --